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| APPLICATION NO.  | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|------------------|
| 09/975,491   | 10/10/2001  | Pekka Ranta          | 297-010564-US(PAR)  | 9690             |
| 2512   | 7590        | 06/13/2005           | EXAMINER            |                  |
| PERMAN & GREEN<br>425 POST ROAD<br>FAIRFIELD, CT 06824 |             |                      | CHO, HONG SOL       |                  |
|  |             |                      | ART UNIT            | PAPER NUMBER     |
|  |             |                      | 2662                |                  |

DATE MAILED: 06/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                        |  |                     |  |
|------------------------------|------------------------|--|---------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b> |  | <b>Applicant(s)</b> |  |
|                              | 09/975,491             |  | RANTA, PEKKA        |  |
|                              | <b>Examiner</b>        |  | <b>Art Unit</b>     |  |
|                              | Hong Cho               |  | 2662                |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.  
     4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9, 13, 16 and 19 is/are rejected.
- 7) ☒ Claim(s) 10-12, 14, 15, 17 and 18 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 October 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. ____.  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>10102001, 03252003</u> .  | 6) <input type="checkbox"/> Other: ____.                                    |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.
2. Claims 1, 13, 16 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Blanc et al et al (U.S 6661777), hereinafter referred to as Blanc in view of Lodenius (U.S 5799091).

Re claims 1, 13, 16 and 19, Blanc discloses a fast signaling channel for broadcasting UTRAN (UMTS (Universal Mobile Telephone Service) Radio Access Network) information to packet users (*implementing fast signaling in a communication connection between a base station and a mobile station of a cellular radio network*, column 8, lines 48-51. Blanc discloses the frame timing in the network (*defining an arrangement of repeatedly occurring frames that consist of pieces of allocatable radio communication capacity between the base station and mobile stations communicating therewith*, column 7, lines 51-57) and broadcasting every frame with packet information

on the Broadcast Channel (BCH), the Associated Control Channel (ACCH), the Forward Access Control Channel (FACH) or a fast signaling channel (*allocating pieces of radio communication capacity from the arrangement of repeatedly occurring frames to dedicated communication* channel, column 7, lines 54-65; column 8, lines 48-51). Blanc fails to disclose allocating a piece of radio communication capacity from the arrangement of repeatedly occurring frames to non-dedicated communication channel and utilizing said piece of radio communication capacity allocated to a non-dedicated fast signaling channel for conveying fast signaling messages between at least one mobile station and the base station. Lodenius discloses a Fast Associated Control Channel (FACCH), which uses capacity from the traffic channels for fast signaling needs (column 6, lines 45-48). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Blanc to use the concept of FACCH of Lodenius in allocating a non-dedicated fast signaling channel for conveying fast signaling messages between at least one mobile station and the base station so that it would not require the dedication of valuable radio resources to the new control channel in transmitting a control message.

Claims 2 and 5-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Blanc in view of Lodenius and further in view of Schulz (U.S 6571101).

Re claim 2, Blanc and Lodenius disclose all of the limitation of the base claim, but fail to disclose the step of allocating a piece of radio communication capacity from the arrangement of repeatedly occurring frames to a completely non-dedicated fast

signaling channel, so that all mobile stations communicating with said base station are equally allowed to use said non-dedicated fast signaling channel. Schulz discloses simultaneous access of a plurality of mobile stations to the signaling channel (column 1, lines 39-41). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Blanc to use the concept of multiple access of Schulz in accessing non-dedicated fast signaling channel to provide fair access to the channel when a given mobile station has data to transmit.

Re claims 5-9, Blanc and Lodenius disclose all of the limitation of the base claim, but fail to disclose using multiple access schemes to separate fast signaling transmissions relating to several mobile stations from each other. Schulz discloses using frequency division multiple access (FDMA), time division multiple access (TDMA), and code division multiple access (CDMA) as well as a combination of these methods to distinguish between different signaling sources. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Blanc to use the concept of multiple access of Schulz in accessing non-dedicated fast signaling channel based on these multiple access schemes so that a particular multiple access scheme or a combination of these multiple access schemes would be employed to meet a design choice. CDMA would allow numerous signals to occupy a single transmission for optimizing the use of available bandwidth. TDMA would increase the amount of data that can be carried by dividing each cellular channel into three time slots. FDMA would allow a single base station to serve many callers by dividing a radio frequency into several channels by splitting the frequency band into distinct segments, which are

assigned to various callers. FDMA is combined with TDMA for better use of narrow resources by allowing different users transmit using the same frequency at different time.

Claims 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Blanc in view of Lodenius and further in view of Quick (U.S 5673259).

Re claims 3 and 4, Blanc and Lodenius disclose all of the limitation of the base claim, but fail to disclose the step of allocating a piece of radio communication capacity from the arrangement of repeatedly occurring frames to a virtually non-dedicated fast signaling channel, so that a well-defined subgroup of all mobile stations communicating with said base station are mutually equally allowed to use said non-dedicated fast signaling channel. Quick discloses a mobile station receiving unique Long Code from a base station in a given cell site and uses that Long Code to transmit over the access channel to an access channel transceiver in the cell site (column 8, line 59 to column 9, line 3). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Blanc to use the concept of multiple access of Schulz in accessing non-dedicated fast signaling channel based on particular mobile user ID in accord with a cell site so that a user access request from other cell sites would be prevented.

*Allowable Subject Matter*

3. Claims 10-12, 14, 15, 17 and 18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is an examiner's statement for reasons for allowance.

4. Claims 10 and 11 are allowable over the prior art of record since the cited references taken individually or in combination fail to particularly teach or fairly suggest the step of using a piece of radio communication capacity allocated to a non-dedicated fast signaling channel for conveying fast signaling messages comprises the substep of transmitting a fast signaling message where a training sequence is accompanied by at least one information symbol additional to the training sequence.

Claim 12 is allowable over the prior art of record since the cited references taken individually or in combination fail to particularly teach or fairly suggest the step of using said piece of radio communication capacity allocated to a non-dedicated fast signaling channel for conveying fast signaling messages comprises the substep of transmitting a fast signaling message where a training sequence is selected from a number of alternative training sequences in order to convey a piece of information through the selection of a particular training sequence.

Claims 14, 15, 17 and 18 are allowable over the prior art of record since the cited references taken individually or in combination fail to particularly teach or fairly suggest

examining whether a part of an existing dedicated communication connection between the mobile station and the base station is available for conveying fast signaling messages between said mobile station and the base station and only if such a part of an existing dedicated communication connection between the mobile station and the base station is not found to be available for conveying fast signaling messages between said mobile station and the base station, implementing the step of using said piece of radio communication capacity allocated to a non-dedicated fast signaling channel for conveying fast signaling messages between said mobile station and the base station.

### ***Conclusion***

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.
  - US Patent (6456627) to Frodigh et al
  - US Patent (5625872) to Sawyer
  - US Patent (6078572) to Tanno et al
6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hong Cho whose telephone number is 571-272-3087. The examiner can normally be reached on Mon-Fri during 7 am to 4 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on 571-272-3088. The fax phone number for the organization where this application or proceeding is assigned is 571-273-3088.



Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

hc  
Hong Cho  
Patent Examiner  
6/6/2005

  
HASSAN KIZOU  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600